

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An image transfer method, comprising:

optically neutralizing a surface potential of an image bearing element that carries a toner image so as to create an optically neutralized surface on said image bearing element;

controlling a surface potential of a transfer medium so that toner is not transferred from the image bearing element to the transfer medium at an upstream of a contact area between the image bearing element and the transfer medium, while controlling a surface potential of a transfer medium so that the toner is transferred from the image bearing element to the transfer medium at a toner nip portion; and

transferring a plurality of toner images of different colors from the image bearing element repeatedly to the transfer medium to form a superposed toner image on the transfer medium, wherein

said step of controlling a surface potential includes applying a negative voltage to said transfer medium before said optically neutralized surface reaches said toner nip portion and applying a positive voltage to said transfer medium after said optically neutralized surface leaves said toner nip portion.

Claim 2 (Original): The image transfer method according to claim 1, wherein the transfer medium is either of a belt and a drum, further comprising:

transferring the superposed toner image on to a recording medium.

Claim 3 (Currently Amended): An image transfer method, comprising:

optically neutralizing a surface potential of each of a plurality of image bearing elements that carry toner images made from toners of different colors so as to create an optically neutralized surface on said image bearing element;

controlling a surface potential of a transfer medium so that the toners are not transferred from the image bearing element to the transfer medium at an upstream of a contact area between the image bearing element and the transfer medium, while controlling a surface potential of a transfer medium so that the toner is transferred from the image bearing element to the transfer medium at a toner nip portion; and

transferring the toner images from the image bearing elements to the transfer medium to form a superposed toner image on the transfer medium, wherein

said step of controlling a surface potential includes applying a negative voltage to said transfer medium before said optically neutralized surface reaches said toner nip portion and applying a positive voltage to said transfer medium after said optically neutralized surface leaves said toner nip portion.

Claim 4 (Original): The image transfer method according to claim 3, wherein the transfer medium is either of a belt and a drum, further comprising:

transferring the superposed toner image on to a recording medium.

Claim 5 (Currently Amended): An image forming method, comprising:

forming an electrostatic latent image on an image bearing element;

forming a toner image from the electrostatic latent image using toner;

optically neutralizing a surface potential of the image bearing element that carries the toner image so as to create an optically neutralized surface on said image bearing element;

controlling a surface potential of a transfer medium so that the toner is not transferred from the image bearing element to the transfer medium at an upstream of a contact area between the image bearing element and the transfer medium, while controlling a surface potential of a transfer medium so that the toner is transferred from the image bearing element to the transfer medium at a toner nip portion; and

transferring a plurality of toner images of different colors from the image bearing element repeatedly to the transfer medium to form a superposed toner image on the transfer medium, wherein

said step of controlling a surface potential includes applying a negative voltage to said transfer medium before said optically neutralized surface reaches said toner nip portion and applying a positive voltage to said transfer medium after said optically neutralized surface leaves said toner nip portion.

Claim 6 (Original): The image forming method according to claim 5, wherein the transfer medium is either of a belt and a drum, further comprising:

transferring the superposed toner image on to a recording medium; and
forming a final image by fixing the superposed toner image on the recording medium.

Claim 7 (Original): The image forming method according to claim 5, wherein the surface potential of the image bearing element is neutralized by irradiating a light.

Claim 8 (Previously Presented): The image forming method according to claim 7, wherein

the neutralization by the light irradiation is carried out using a light emitting device, wherein the light emitting device includes a light emitting diode, a laser diode, or a xenon lamp, and

the surface potential of the image bearing element is controlled by controlling an amount of the neutralization by adjusting an amount of a light emission based on a relation between the amount of a light emission and a current flowing in or a voltage applied to the light emitting device.

Claim 9 (Original): The image forming method according to claim 5, wherein the surface potential of the image bearing element is neutralized by supplying ions emitted from an ion generating device.

Claim 10 (Original): The image forming method according to claim 9, wherein the ion generating device is either of a corotron and a scorotron.

Claim 11 (Original): The image forming method according to claim 5, wherein the charge neutralization takes place after forming the toner images on the image bearing element and before transferring the toner images to the transfer medium.

Claim 12 (Original): The image forming method according to claim 5, wherein the surface potential of the transfer medium has same polarity as a toner potential on the image bearing element, and

an absolute value of the surface potential of the transfer medium is equal to or greater than an absolute value of the toner potential.

Claim 13 (Original): The image forming method according to claim 12, wherein the surface potential of the image bearing element is controlled by applying a potential to a conductive element that is disposed in contact with a back of the transfer medium.

Claim 14 (Original): The image forming method according to claim 13, wherein a shape of the conductive element is a roller.

Claim 15 (Original): The image forming method according to claim 13, wherein a shape of the conductive element is a plate.

Claim 16 (Original): The image forming method according to claim 13, wherein a shape of the conductive element is a brush.

Claim 17 (Original): The image forming method according to claim 12, wherein the surface potential of the transfer medium is controlled by charging a surface of the transfer medium at the upstream of the contact area.

Claim 18 (Original): The image forming method according to claim 17, wherein the transfer medium is charged by a scorotron.

Claim 19 (Original): The image forming method according to claim 17, wherein the transfer medium is charged by applying a voltage to a contact conductive element that rotates at same speed as the transfer medium.

Claim 20 (Original): The image forming method according to claim 17, wherein the transfer medium is charged by applying a voltage to a non-contact conductive element.

Claim 21 (Original): The image forming method according to claim 5, wherein an amount of charge neutralized from the image bearing element is controlled based on information of the image that is formed on the image bearing element.

Claim 22 (Original): The image forming method according to claim 5, wherein the surface potential of the transfer medium is controlled based on information of the image that is formed on the image bearing element.

Claim 23 (Original): The image forming method according to claim 5, wherein a transfer bias potential applied to the transfer medium is controlled based on information of the image that is formed on the image bearing element.

Claim 24 (Previously Presented): The image forming method according to claim 5, wherein neutralization of the surface potential of the image bearing element and control of the surface potential of the transfer medium are executed from the time of transferring a toner image of another color when superposing the toner images.

Claim 25 (Original): The image forming method according to claim 5, wherein a degree of roundness of the toner is equal to or more than 0.94.

Claim 26 (Currently Amended): An image forming method, comprising:
forming electrostatic latent images on a plurality of image bearing elements;
forming toner images from the electrostatic latent images using toners of different colors;
optically neutralizing a surface potential of each of the image bearing elements that carry the toner images so as to create an optically neutralized surface on said image bearing element;
controlling a surface potential of a transfer medium so that the toners are not transferred from the image bearing elements to the transfer medium at an upstream of a contact area between the image bearing elements and the transfer medium, while controlling a surface potential of a transfer medium so that the toner is transferred from the image bearing element to the transfer medium at a toner nip portion; and
transferring the toner images from the image bearing elements to the transfer medium to form a superposed toner image on the transfer medium, wherein
said step of controlling a surface potential includes applying a negative voltage to said transfer medium before said optically neutralized surface reaches said toner nip portion and applying a positive voltage to said transfer medium after said optically neutralized surface leaves said toner nip portion.

Claim 27 (Original): The image forming method according to claim 26, wherein the transfer medium is either of a belt and a drum, further comprising:
transferring the superposed toner image on to a recording medium; and

forming a final image by fixing the superposed toner image on the recording medium.

Claim 28 (Original): The image forming method according to claim 26, wherein the surface potential of the image bearing element is neutralized by irradiating a light.

Claim 29 (Previously Presented): The image forming method according to claim 28, wherein

the neutralization by the light irradiation is carried out using a light emitting device, wherein the light emitting device includes a light emitting diode, a laser diode, or a xenon lamp, and

the surface potential of the image bearing element is controlled by controlling an amount of the neutralization by adjusting an amount of a light emission based on a relation between the amount of a light emission and a current flowing in or a voltage applied to the light emitting device.

Claim 30 (Original): The image forming method according to claim 26, wherein the surface potential of the image bearing element is neutralized by supplying ions emitted from an ion generating device.

Claim 31 (Original): The image forming method according to claim 30, wherein the ion generating device is either of a corotron and a scorotron.

Claim 32 (Original): The image forming method according to claim 26, wherein the charge neutralization takes place after forming the toner images on the image bearing element and before transferring the toner images to the transfer medium.

Claim 33 (Original): The image forming method according to claim 26, wherein the surface potential of the transfer medium has same polarity as a toner potential on the image bearing element, and an absolute value of the surface potential of the transfer medium is equal to or greater than an absolute value of the toner potential.

Claim 34 (Original): The image forming method according to claim 33, wherein the surface potential of the image bearing element is controlled by applying a potential to a conductive element that is disposed in contact with a back of the transfer medium.

Claim 35 (Original): The image forming method according to claim 34, wherein a shape of the conductive element is a roller.

Claim 36 (Original): The image forming method according to claim 34, wherein a shape of the conductive element is a plate.

Claim 37 (Original): The image forming method according to claim 34, wherein a shape of the conductive element is a brush.

Claim 38 (Original): The image forming method according to claim 33, wherein the surface potential of the transfer medium is controlled by charging a surface of the transfer medium at the upstream of the contact area.

Claim 39 (Original): The image forming method according to claim 38, wherein the transfer medium is charged by a scorotron.

Claim 40 (Original): The image forming method according to claim 38, wherein the transfer medium is charged by applying a voltage to a contact conductive element that rotates at same speed as the transfer medium.

Claim 41 (Original): The image forming method according to claim 38, wherein the transfer medium is charged by applying a voltage to a non-contact conductive element.

Claim 42 (Original): The image forming method according to claim 26, wherein an amount of charge neutralized from the image bearing element is controlled based on information of the image that is formed on the image bearing element.

Claim 43 (Original): The image forming method according to claim 26, wherein the surface potential of the transfer medium is controlled based on information of the image that is formed on the image bearing element.

Claim 44 (Original): The image forming method according to claim 26, wherein a transfer bias potential applied to the transfer medium is controlled based on information of the image that is formed on the image bearing element.

Claim 45 (Previously Presented): The image forming method according to claim 26, wherein neutralization of the surface potential of the image bearing element and control of

the surface potential of the transfer medium are executed from the time of transferring a toner image of another color when superposing the toner images.

Claim 46 (Original): The image forming method according to claim 26, wherein a degree of roundness of the toner is equal to or more than 0.94.

Claim 47 (Currently Amended): An image forming apparatus, comprising:

- an image bearing element;
- a latent image forming unit that forms an electrostatic latent image on the image bearing element;
- a developing unit that develops the electrostatic latent image to form a toner image on the image bearing element using toner;
- a transfer unit that transfers the toner image on to a transfer medium, wherein the transfer unit transfers a plurality of toner images of different colors from the image bearing element repeatedly to the transfer medium to form a superposed toner image on the transfer medium;
- a neutralizing unit that, when the toner image is transferred, optically neutralizes a surface potential of the image bearing unit so as to create an optically neutralized surface on said image bearing element; and
- a control unit that controls a surface potential of the transfer medium so that the toner is not transferred from the image bearing element to the transfer medium at an upstream of a contact area between the image bearing element and the transfer medium, wherein the control unit controls the surface potential of the transfer element so that the toner is transferred from the image bearing element to the transfer medium at a transfer nip portion, wherein

said control unit includes a first controlling device configured to apply a negative voltage to said transfer medium before said optically neutralized surface reaches said toner nip portion and a second controlling device configured to apply a positive voltage to said transfer medium after said optically neutralized surface leaves said toner nip portion.-

Claim 48 (Original): The image forming apparatus according to claim 47, wherein the transfer medium is either of a belt and a drum, further comprising:

a secondary transfer unit that transfers the superposed toner image on to a recording medium; and

a fixing unit that fixes the superposed toner image transferred on to the recording medium.

Claim 49 (Currently Amended): An image forming apparatus, comprising:

a plurality of image bearing elements;

a plurality of latent image forming units that form electrostatic latent images on the image bearing elements;

a plurality of developing units that develop the electrostatic latent images to form toner images on the image bearing elements using toners of different colors;

a transfer unit that transfers the toner images on to a transfer medium, wherein the transfer unit transfers the toner images of different colors from the image bearing elements repeatedly to the transfer medium to form a superposed toner image on the transfer medium;

a neutralizing unit that, when the toner image is transferred, optically neutralizes a surface potential of the image bearing unit so as to create an optically neutralized surface on said image bearing element; and

a control unit that controls a surface potential of the transfer medium so that the toner is not transferred from the image bearing element to the transfer medium at an upstream of a contact area between the image bearing element and the transfer medium, wherein the control unit controls the surface potential of the transfer element so that the toner is transferred from the image bearing element to the transfer medium at a transfer nip portion, wherein

said control unit includes a first controlling device configured to apply a negative voltage to said transfer medium before said optically neutralized surface reaches said toner nip portion and a second controlling device configured to apply a positive voltage to said transfer medium after said optically neutralized surface leaves said toner nip portion.

Claim 50 (Original): The image forming apparatus according to claim 49, wherein the transfer medium is either of a belt and a drum, further comprising:

a secondary transfer unit that transfers the superposed toner image on to a recording medium; and

a fixing unit that fixes the superposed toner image on the recording medium.

Claim 51 (Original): The image forming apparatus according to claim 49, further comprising:

cleaning units that clean the image bearing elements and collects residual toner left untransferred; and

a toner recycling unit that returns the toner collected in the toner cleaning units to the developing units.

IN THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 3. This sheet, which includes Fig. 3, replaces the original sheet including Fig. 3.

Attachment: Replacement Sheet